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(54) Title: PROCESS FOR THE PREPARATION OF (S)- OR (R)-4-HALO-3-HYDROXYBUTYRATES

$$OH O OR^2$$
 (S)-I (la)

$$\begin{array}{ccc}
OH & O \\
\hline
OR^2 & (R)-I, & (Ib)
\end{array}$$

$$R^1$$
 O O O O O

$$\begin{array}{c} F \\ O \\ \hline F \\ O \\ \hline \end{array} \begin{array}{c} PPh_2 \\ \hline \end{array} \hspace{0.5cm} (III)$$

(57) Abstract: Process for the preparation of enantiomerically pure (S)- or (R)-4-halo-3-hydroxybutyrates of formula (I), wherein R^1 is CH_2X , CHX_2 or CX_3 and X independently represents C1 and/or Br and wherein R^2 is $C_{1.6}$ -alkyl, $C_{3.8}$ -cycloalkyl, aryl or aralkyl, each aryl or aralkyl being optionally further substituted with one or more $C_{1.4}$ -alkyl groups and/or halogen atoms, by asymmetric hydrogenation of 4-halo-3-oxobutyric acid esters of formula (II), wherein R^1 , R^2 and X are as defined above in the presence of a catalyst of a ruthenium complex comprising a chiral ligand of the formula (III).

